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EXAMINER

DARNER, CHRISTOPHER J

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/543,015	<b>Applicant(s)</b> PATRICK ET AL.	
	<b>Examiner</b> Christopher J. Darner	<b>Art Unit</b> 4112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/29/2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903).

With respect to claim 1, Stemler teaches a strengthening component in the form of an inverted channel member secured to the base component, with the channel member (14) including two opposed side walls formed from web components and a top formed from a chord component (16), and with the web and top chord components being manufactured as separate components and thereafter assembled together to form the channel member at column 4, lines 53-54.

Stemler does not teach a base component that includes a central pan and lap joints on each side of the pan to enable adjacent main decking panels to be positioned side by side in overlapping relationship. Hertweck teaches a base component that includes a central pan (11) and lap joints (13) on each side of the pan to enable adjacent main decking panels to be positioned side by side in overlapping relationship

in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler by including a base component that includes a central pan and lap joints on each side of the pan to enable adjacent main decking panels to be positioned side by side in overlapping relationship as taught by Hertweck in order to provide a support foundation for main deck panel.

With respect to claim 2, Stemler does not teach the main decking panel wherein the central pan includes at least one longitudinal stiffener. Hertweck teaches the main decking panel wherein the central pan includes at least one longitudinal stiffener at column 4, lines 23-27. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler by including the main decking panel wherein the central pan includes at least one longitudinal stiffener as taught by Hertweck in order to provide stiffness and strength to the central pan.

With respect to claim 3, Stemler does not teach the main decking panel wherein the web components are secured to the base component at locations between the longitudinal stiffener or stiffeners and the lap joints. Hertweck teaches the main decking panel wherein the web components are secured to the base component at locations (12) between the longitudinal stiffener or stiffeners and the lap joints at column 4, lines 29-33. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler by including the main decking panel wherein the web components are secured to the base component at locations between the longitudinal stiffener or stiffeners and the lap joints as taught by Hertweck in order to increase the rigidity of the main decking panel.

With respect to claim 4, Stemler does not teach the main decking panel wherein the web components butt against the longitudinal stiffener or stiffeners and/or lap joints. Hertweck teaches the main decking panel wherein the web components butt against the longitudinal stiffener or stiffeners and/or lap joints at column 4, lines 33-36. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler by including the main decking panel wherein the web components butt against the longitudinal stiffener or stiffeners and/or lap joints as taught by Hertweck in order to increase the structural integrity of the main decking panel.

With respect to claim 6, Stemler teaches the main decking panel wherein the strengthening component is secured to the base component at a plurality of discrete connection locations (24) along the length of the channel member in Figure 1.

With respect to claim 10, Stemler teaches the main decking panel wherein the web components (14) and the top chord components (16) are assembled together by securing the components together at a plurality of discrete connection locations (30) along the lengths of the components at column 4, lines 57-59.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) as applied to claim 1 above, and further in view of Holmgren (U.S. Patent # 3,583,123).

Stemler in view of Hertweck does not teach the main decking panel wherein the lap joints are formed so that a successive decking panel can be positioned in sided by side overlapping relationship with another decking panel by pressing the lap joint of the

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successive decking panel downwardly over the lap joint of the other decking panel.

Holmgren teaches the main decking panel wherein the lap joints are formed so that a successive decking panel can be positioned in sided by side overlapping relationship with another decking panel by pressing the lap joint (32) of the successive decking panel downwardly over the lap joint (40) of the other decking panel at column 3, lines 2-6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including the main decking panel wherein the lap joints are formed so that a successive decking panel can be positioned in sided by side overlapping relationship with another decking panel by pressing the lap joint of the successive decking panel downwardly over the lap joint of the other decking panel as taught by Holmgren in order to facilitate the connection of consecutive decking panels.

4. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) and further in view of Stohs (U.S. Patent # 4,726,159).

With respect to claim 7, Stemler in view of Hertweck does not teach the main decking panel wherein the strengthening component is secured to the base component at the plurality of discrete connection locations by deformed sections of the components at the locations that interlock the components together. Stohs teaches the main decking panel wherein the strengthening component is secured to the base component at the plurality of discrete connection locations (52, 48) by deformed sections of the

components at the locations that interlock the components together at column 6, lines 50-54 and lines 59-62. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the strengthening component is secured to the base component at the plurality of discrete connection locations by deformed sections of the components at the locations that interlock the components together as taught by Stohs in order to provide increased stability and structural strength for the decking panel.

With respect to claim 8, Stemler in view of Hertweck teaches the claimed invention except for button shaped deformed section. It would have been obvious to one having ordinary skill in the art at the time the invention was made to shape the deformed section as a button, a change in the shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

With respect to claim 9, Stemler in view of Hertweck does not teach the main decking panel wherein the deformed sections are formed by holding the components together and pressing the deformed sections, such as buttons, from one side of the components. Stohs teaches the main decking panel wherein the deformed sections are formed by holding the components together (compression) and pressing the deformed sections, such as buttons, from one side of the components at column 7, lines 4-8. It

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would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the deformed sections are formed by holding the components together and pressing the deformed sections, such as buttons, form one side of the components as taught by Stohs in order to provide a snap-like engagement to the connection.

5. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) and further in view of Ryan (U.S. Patent # 4,453,349).

With respect to claim 11, Stemler in view of Hertweck does not teach the main decking panel wherein the web components and the top chord components are assembled together at the plurality of discrete connection locations by deformed sections of the components at the locations that interlock the components together. Ryan teaches the main decking panel wherein the strengthening component is secured to the base component at the plurality of discrete connection locations (1b) by deformed sections of the components at the locations that interlock the components together in Figure 9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the strengthening component is secured to the base component at the plurality of discrete connection locations by deformed sections of the components at the locations that interlock the components together as taught by Ryan in order to provide increased stability and structural strength for the decking panel.



With respect to claim 12, Stembler in view of Hertweck teaches the claimed invention except for button shaped deformed section. It would have been obvious to one having ordinary skill in the art at the time the invention was made to shape the deformed section as a button, a change in the shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Note that those of ordinary skill in the art would appreciate that a modification such as a mere change in shape of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

With respect to claim 13, Stemler in view of Hertweck does not teach the main decking panel wherein the deformed sections are formed by holding the components together and pressing the deformed sections, such as buttons, from one side of the components. Ryan teaches the main decking panel wherein the deformed sections are formed by holding the components together (compression) and pressing the deformed sections, such as buttons, from one side of the components at column 2, lines 28-31. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including the main decking panel wherein the deformed sections are formed by holding the components together and pressing the deformed sections, such as buttons, from one side of the components as taught by Ryan in order to provide a snap-like engagement to the connection.

With respect to claim 14, Stemler in view of Herweck does not teach the main decking panel wherein the web components include flanges and the web and top chord components are secured together at the flanges. Ryan teaches the main decking panel wherein the web components include flanges and the web and top chord components are secured together at the flanges (1b) at column 2, lines 23-27. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the web components include flanges and the web and top chord components are secured together at the flanges as taught by Ryan in order to provide a balanced main deck panel that has the substantially the same resistance to both compression and tension loading forces.

6. Claims 15-17 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) as applied to claim 1 above, and further in view of Gray (U.S. Patent # 4,594,826).

With respect to claim 15, Stemler in view of Hertweck does not teach the main decking panel wherein the top chord component includes one or more than one longitudinal stiffener. Gray teaches the main decking panel wherein the top chord component includes one or more than one longitudinal stiffener (102) at column 4, lines 45-48. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the top chord component includes one or more than one

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longitudinal stiffener as taught by Gray in order to provide stiffness and strength to the top chord component.

With respect to claim 16, Stemler in view of Hertweck does not teach the main decking panel wherein the stiffener or stiffeners extend along the length of the top chord component. Gray teaches the main decking panel wherein the stiffener or stiffeners (102) extend along the length of the top chord component in Figure 4. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the stiffener or stiffeners extend along the length of the top chord component as taught by Gray in order to provide stiffness and strength to the top chord component.

With respect to claim 17, Stemler in view of Hertweck does not teach the main decking panel wherein the top chord component includes down-turned sides. Gray teaches the main decking panel wherein the top chord component includes down-turned sides (58) in Figure 2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the main decking panel wherein the top chord component includes down-turned sides as taught by Gray in order to provide a potential attachment location.

With respect to claim 20, Stemler in view of Hertweck does not teach the main decking panel wherein web components include openings to allow concrete to flow into the channel member. Gray teaches the main decking panel wherein web components include openings (70, 72) to allow concrete to flow into the channel member at column 4, lines 12-17. It would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify Stembler in view of Hertweck by including the main decking panel wherein web components include openings to allow concrete to flow into the channel member as taught by Butler in order to anchor the channel member of the main decking panel.

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) as applied to claim 1 above, and further in view of Albrecht (U.S. Patent # 4,962,622).

With respect to claim 18, Stemler in view of Hertweck does not teach the main decking panel wherein the web components include corrugations. Albrecht teaches the main decking panel wherein the web components include corrugations (98) at column 5, lines 5-9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including the main decking panel wherein the web components include corrugations as taught by Albrecht in order to enhance the composite co-action between the main decking panels and the overlying concrete layer.

With respect to claim 19, Stemler in view of Hertweck does not teach the main decking panel wherein the corrugations (98) are vertical corrugations. Albrecht teaches the main decking panel wherein the corrugations are vertical corrugations in Figure 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including the main decking panel wherein the web components include corrugations as taught by Albrecht in order to

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enhance the composite co-action between the main decking panels and the overlying concrete layer.

8. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stemler (U.S. Patent # 4,709,435) in view of Hertweck (U.S. Patent # 6,434,903) as applied to claim 1 above, and further in view of Albrecht (U.S. Patent # 4,085,558).

With respect to claim 21, Stemler in view of Hertweck does not teach the structural decking system formed from a plurality of the main decking panel positioned side by side with the lap joint in overlapping relationship. Albrecht teaches the structural decking system formed from a plurality of the main decking panel (28) positioned side by side with the lap joint (36) in overlapping relationship at column 4, lines 20-23. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stemler in view of Hertweck by including the structural decking system formed from a plurality of the main decking panel positioned side by side with the lap joint in overlapping relationship as taught by Albrecht in order to provide anchor sites for additional devices.

With respect to claim 22, Stemler in view of Hertweck does not teach the structural decking system includes one or more than one infill decking panel that is positioned between two main decking panels, with the infill decking panel including lap joints one each side of the pan that are in overlapping relationship with the lap joints of adjacent main decking panels. Albrecht teaches the structural decking system includes one or more than one infill decking panel (32) that is positioned between two main

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decking panels, with the infill decking panel including lap joints (52, 54) one each side of the pan that are in overlapping relationship with the lap joints (36) of adjacent main decking panels at column 4, lines 13-16, Figure 1 and Figure 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including the structural decking system includes one or more than one infill decking panel that is positioned between two main decking panels, with the infill decking panel including lap joints one each side of the pan that are in overlapping relationship with the lap joints of adjacent main decking panels as taught by Albrecht in order to allow for present and future distribution of electrical services throughout the floor structure.

With respect to claim 23, Stembler in view of Hertweck does not teach a composite slab that includes the structural decking system and a layer of hardened concrete on the structural decking system. Albrecht teaches a composite slab that includes the structural decking system and a layer of hardened concrete (24) on the structural decking system at column 4, lines 7-9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Stembler in view of Hertweck by including a composite slab that includes the structural decking system and a layer of hardened concrete on the structural decking system as taught by Albrecht in order to provide a stable strong floor fill.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maurer (U.S. Patent # 3,667,185) teaches panel and lap joint made therefrom, Haszler et al. (U.S. Patent # 6,848,233) teaches composite aluminium panel, Kenaga (U.S. Patent # 3,740,916) teaches panel construction, Nurley et al. (U.S. Patent # 6,250,036 B1) teaches sound control system for steel roof decks, Meredith (U.S. Patent # 6,568,144 B2) teaches metal construction panel, Bailey (U.S. Patent # 2,682,939) teaches building structure, Gray (U.S. Patent # 4,594,826) teaches field – assembled raceway forming member, and Albrecht et al. (U.S. Patent # 3,812,636) teaches sheet metal decking unit and composite floor construction utilizing the same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Darner whose telephone number is 571-270-3658. The examiner can normally be reached on Monday thru Friday 8AM to 4:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David V. Bruce can be reached on 571-272-2487. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cd

/David V Bruce/

Supervisory Patent Examiner, Art Unit 4112